

Information and Communication Technology and Human Resources Management in the Nigeria University System (2010-2021).

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Abstract: *Human resource is a critical factor in the attainment of organizational goals. This is because all the organizational activities are initiated and determined by the persons who make up that institution; as plants, offices, computers, automated equipment and all else that a modern firm uses are unproductive except for human effort and direction. The special abilities, skill and knowledge needed to turn thing around in any organization for good are embedded in human beings and to get things done well in the organization, those latent skills, talents, knowledge, skills abilities and capabilities are harnessed through a process called human resources management. The use of tools and technology has been argued to have helped the harnessing of the potentials of the persons in an organization. However, these abilities and capabilities of these persons to contribute significantly to the attainment of organizational goals have contemporarily, been hindered and hampered by some issues that are solvable by information communication technology (ICT). ICT has been said to have a significant relationship with human resources management. This paper examined the impact of Information and Communication Technology on Human Resources Management in the Nigeria University System (2010-2021). Two specific objectives guided the study. The theoretical framework employed is the system's theory of David Easton (1954). Ex-post-facto research design was adopted. The paper found out that: Inadequate ICT infrastructure has affected Human Resource Management in the Nigeria University system. More so, the poor application of ICT has affected Human Resource Management in the Nigeria University system. And based on the findings, the study recommended among others that: The Public Universities' Management should employ an enthusiastic approach toward the adoption and proper application of ICT in the University system. Again, since lack of up-to-date infrastructures, unstable power supply and Lack of financial resources are the major problems of ICT adoption in Human Resource management and therefore should be enhanced.*

Keywords: human resource, management, information technology, organizational goals, ICT.

Introduction

Although Information and communication Technology (ICT) provides enormous opportunities such as storing, processing, retrieving, disseminating and sharing of information in organization, its use within the University in the developing countries is still plagued with many problems that hinder effective and efficient management, even though its adoption has been shown to improve Universities' performances since ICT is known as a tool that improves organizations' competitiveness (Sheppard & Hooton, 2006; Alam et al, 2007 and Apulu & Latham, 2009).

Universities world over, are highly reputed for and regarded as centres for training and production of high caliber manpower that every country requires for its development. This, however, is based on the level of information they poses, how they communicate it and what technology available to them. The Public Universities in Nigeria have, at their disposal, personnel with enormous human resources, for the attainment of their aims and objectives in teaching and research which must as a matter of strategy and policy, be managed and administered well to ensure effective and efficient results. It is this quest for efficiency that necessitated the pursuit for better management of the staff of the Universities necessitated also by the changes which modern organizations heralds and which call for changes in the method of operations of the Public Universities in Nigeria, hence these changes brought about by new technologies have had significant impact on the way the University staff live and work.

However, these changes-turned-challenges emanated from the pervasiveness of information and communication technology (ICT) in all sectors of human activity. Information and communication technology which refers to any technology that facilitates communication and assists in capturing, processing and transmitting information electronically, offers tremendously overwhelming opportunities and capabilities such as storing, processing, retrieving, disseminating and sharing of information in organization such as the University of Nigeria. Its adoption was to help the University achieve competitive advantage. Howbeit, its usage has been problematic as the majority of the University staffs are not computer literate or ICT compliant. Resultantly, some of them hate the idea and therefore oppose the changes that accompanied its adoption, leading to poor application of the ICT related tools and machines, and that makes this research work a necessity especially now that all aspect of work is digitalized. This is so because for

a given institution, whatever the degree of its economic viability, the attainment of its objectives as well as the well being of its staff is proportional to the level of skills, knowledge and qualifications of its staffs as highly skilled workers have the tendency to increase the organizational competitive advantage and also increase their own job/professional competences. This is because well qualified workers are better adjusted to possible changes in job profiles; less vulnerable to possible loss of employment; able to update and upgrade their skills and competencies.

Suffice it therefore to say that the Public Universities in Nigeria have kept pace with technological trends since inception; trends that have brought about changes in the job profiles. In recent times, ICT has been avidly evolved as evidenced in the launching of the Universities Portal for all students and staff profile management; the Public Universities in Nigeria website for dissemination of information; the M.I.S for information and data management; Internet facility for free browsing; the University cybercafé and a digitalized Library. These developments were to help the University in the Management of her Human Resources especially in the area of staff recruitment vis-à-vis online recruitment advertisement, staff remuneration and general staff profile management, as data management has become one of the critical issues in modern organizational management. Yet, ICT have not thrived in the University because of poor application and other related factors such as inadequate ICT related skilled manpower (Woherem, 1993; Kunda & Brooks, 2000).

Prior to the adoption of information and communication technology (ICT) in Nigeria, organizations have been functional and efficient. However, the complexity of modern organization which characterizes today's organization, has warranted the adoption of ICT. This is in respect of the gains associated with the application of ICT in the organizations of the western world. Such expected gains have eluded us in this side of the world. Many scholars have averred that the reason is because ICT have not been fully incorporated into the operations of the African organizations (Okot-Uma, 1992; Kuteyi, 2009) such as the Universities in Nigeria mainly because of lack of skilled manpower in the area of ICT and this explains why the much desired gains have not be obtainable in our society. In the University of Nigeria for instance, the expected gains of ICT have not been obvious because of poor application and other related factors, some of which are deeply rooted in the culture, history and administrative behaviours of the people so much so that measures put in place to enable efficient application of ICT in Nigerian Universities have not yielded much desired result.

It has also been observed by the researcher that ICT infrastructure in most of these Universities are grossly inadequate, most Universities management staff, Heads of Departments and lecturers still carry office works to private business centres.

Also, it is worthy to note that ICT is faced with myriads of constraints, which have restricted its efficient and effective use. The importance and usefulness of ICT cannot be overemphasized. The National Policy on Education (2014) recognizes the prominent role of Information Communication Technology ICT in the modern world today hence the integration of ICT in Education in Nigeria.

Information has a vital role to play in human life and others area such as staff development, discipline, planning, decision-making process, maintenance of records, communication and students welfare/health services in the Universities in Nigeria. The 20th century ushered in increase in information as a result of social progress and vigorous technological development, information technology is therefore an important area of study on its own right and has impact across all areas of study in the universities in Nigeria. Increase accessed to ICT facilities in the home, at work and educational institutions has promoted E-learning in schools. The rapid development of technology has brought constant insistent evaluation of learning process as a result of the easy worldwide communication which provides access to huge collection of data.

Another problem is poor maintenance of the available ICT infrastructure. The above reasons necessitated the investigation on the impact of ICT on Human Resource Management in Public Universities in Nigeria between 2010-2021.

Objectives of the Study

The broad objective of the study is to assess the impact of ICT on the Human Resource Management of the Nigeria University system.

Specifically, the study seeks to:

1. Determine the extent inadequate ICT infrastructure has affected Human Resource Management in the Nigeria University system.
2. Ascertain how the poor application of ICT has affected Human Resource Management in the Nigeria University system.

Scope of the Study

The study focuses on the impact of ICT on the Human Resource Management in the Nigeria University system. The scope of the geographical coverage of this study is the Nigeria Public University system between 2010 to 2021. The choice of this period was made to ascertain the impact ICT has Human Resource Management in the Nigeria Public University system as at the period of coverage.

Conceptual Clarifications

Information and communication technology

Information has always played a very important role in human life, but in the mid-20th century, it increased immeasurably as a result of social progress and the vigorous development in science and technology" (Ogunsola & Aboyade, 2005). Such increased role

suffices the assertion that rapid expansion of a mass of diversified information is occurring, which has received the name “information explosion”. As a result the need has arisen for a scientific approach to information and for elucidation of its most characteristic properties which has led to two principal changes in interpretation of the concept of information. First, it was broadened to include information exchange not only between man and man but also between machine and machine. The pace of change brought by new technologies has had a significant effect on the way people live, work, and play worldwide (Trostnikov, 1970).

Information and Communications Technology or information and communication technology, usually abbreviated as ICT, is often used as an extended synonym for information technology (IT), but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers, middleware as well as necessary software, storage- and audio-visual systems, which enable users to create, access, store, transmit, and manipulate information. In other words, Information and Communications Technology (ICT) consists of Information Technology (IT) as well as telecommunication, broadcast media, all types of audio and video processing and transmission and network based control and monitoring functions. The expression was first used in 1997 in a report by Dennis Stevenson to the UK government and promoted by the new National Curriculum documents for the UK in 2000.

The term Information and Communications Technology (ICT) is now also used to refer to the merging (convergence) of audio-visual and telephone networks with computer networks through a single cabling or link system (Wikipedia, 2010). There are large economic incentives (huge cost savings due to elimination of the telephone network) to merge the audio-visual, building management and telephone network with the computer network system using a single unified system of cabling, signal distribution and management. This in turn has spurred the growth of organizations with the term ICT in their names to indicate their specialization in the process of merging the different network systems.

Human Resource Management

Human Resources Management as a concept has two key words- management and human resources. Management is the act of handling or controlling something successfully. It could be the skillful handling or use of something such as resources. Management in simple terms means the act of getting people together to accomplish desired goals. It comprises planning, organizing, resourcing, leading or directing, and controlling an organization (a group of two or more people or entities) or effort for the purpose of accomplishing a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources, and natural resources (Microsoft Encarta 2009).

The importance of human resources in any organization cannot be overemphasized. In fact, the ability of any organization to achieve its goals depends on the caliber of its human resources and more importantly, on how effectively they are managed (Ezeani, 2002). There is no doubt that the ability of any organization or society to achieve its goals depends to a large extent on the caliber, organization and motivation of its human resources. This point was succinctly captured by Likert (1974).

Similarly, Harbison (1974) opined that “human resource and not any other, constitutes the ultimate basis for the wealth of a nations. According to Drucker (1978), good organizational structure does not by itself guarantee good performance. Human resource is as important to the existence, survival and development of an organization as food is to man”. Accordingly, Onah (2003) averred that the efficiency with which an organization can perform depends, to a large extent, on how its human resources are managed and utilized. Hence every manager must, therefore be able to work effectively with people and also be able to solve the various problems the management of people may entail. The type of leadership, which characterized our organizations in the first half of the 20th century, is no longer sustainable in the present working environment. The leadership was arbitrary and autocratic in its relationship with subordinates. Today, things have changed. Employees are better educated and their orientation and value system are no longer the same as those of the past. In addition, most organizations are becoming more expected to have greater technical competence and a better understanding of human behaviour. Organizational human resources have become of strategic interest to the top management recently because the effective use of people in organizations can provide a competitive advantage (Mathis & Jackson, 1997).

Human resources, easily recognized as the most important of the resources required for the production of goods and services, are the key to rapid socio-economic development and efficient service delivery.

Inadequate ICT infrastructure and Human Resource Management in Nigeria Universities.

Information and Communication Technology (ICT) has become one of the most important platforms for achieving improved access to education and educational service delivery in most of education system. In recent years, many African countries have recognised the importance of ICT in education and hence have remained an issue of concern in the education system. According to Murphy et al. (2002), Africa’s success in today’s information-based world economy will require an accelerated demographic transition to a flexible, educated, and healthy workforce. Perhaps, this must have been the driving force why most African countries have embarked on an accelerated effort at increasing the number of higher educational institutions in their respective countries. R. Wells and S.

Wells (2007, as cited in Lagmia, 2005) confirmed that “nowhere is this digital divide more apparent or more discussed than Sub-Saharan Africa”. Thus, policy makers in Africa and elsewhere have put forth technical, technical competences, information literacy, etc. as possible solution to many of the problems confronting the educational system. Indeed it is argued that ICT solution could help to solve many of the challenges facing the education system. Some of these problems include those of access, quality, and management among other numerous challenges. As a response to the growing need to improve access to higher education and human

capital development, Universities in Africa and around the world have been providing access to higher education through the ODL mode with ICT as the means of service delivery.

ODL requires ICT infrastructure to effectively provide the needed learning opportunity to students who are not in the conventional schooling system in their various institutions. Since there is restricted opportunity to all eligible and prospecting students to attend the conventional face-to-face system (Isuku, 2007; Isuku & Emunemu, 2012), the ODL support system is developed and implemented by using ICT facilities to provide learning and knowledge sharing as done in the conventional system of schooling. Through this mode, many people are able to make full use of ICT facilities by the application of a wide range of media source, such as print, audio-visual, CD-ROM, computers, and the Internet (Komba, 2009). Jamtsho and Bullen (2007, as cited in Skagen et al., 2006) resonate that in today's information driven society, it has become very important to empower students to be self-directed knowledge on the information super highway. However, in Nigeria, the problem of access to, availability of, and knowledge in the use of these ICT facilities, seems to constitute serious challenges to the goal of achieving increased university education access for greater number of the population. For instance, Internet services and other basic facilities, such as printing machines, fax, telephones, and other ICT driven material, are hardly sufficient where they are available for effective teaching and learning.

Most students do not even have access to personal computers that should help to provide asynchronous modes of communication which would benefit students most probably due to the high poverty level in the country. Although these problems are nevertheless not peculiar to Nigeria and other developing countries (Gyatsho, Daker, Galey, & Jamtsho, 2005), the limited level of availability of these ICT teaching and learning support facilities constitute one of the most serious challenges in the ODL in the country.

Poor application of ICT and Human Resource Management in Nigeria Universities.

Poor policy implementation in Nigeria is another factor responsible for the poor application of ICT facilities for the teaching and learning process in all the basic schools in Nigeria. Patrick and Brenda (2018) cited Laaria, (2013). Since the 1980s implementation of ICT in schools has been compulsory in the developed nations. This is not so in developing nations such as Nigeria, where implementation is considerably more recent, small-scale and experimental. It is, however, universally acknowledged that implementation of ICT in schools has progressed in the nearly identical patterns, from the formulation of policies, attainment of basic computer skills, computer-aided teaching and learning, communications, and research, to usage in every subject. While other countries have achieved over 41% implementation of ICT in secondary schools, the percentage in African schools remains very small.

Oyekanmi, (2016) observed that in the report that the common factor that tends to inhibit the proper implementation of Information and Communication Technology into secondary schools has clearly been attributed to the failure of the government to play their own unquantifiable part by properly equipping the learning materials (the teachers inclusive). Oyekanmi, (2016) cited Bukaliya and Mubika (2012) concluded in their report on the factors militating against the introduction of computer education in secondary schools, highlighted two major factors that are impeding computer education in secondary schools as follow; no budgets for computer procurement in the majority of schools and funds were inadequate for computer procurement as central government did not avail finances for computer procurement.

Poor Network service or poor internet service is another problem preventing effective administration of ICT facilities in basic school for delivering teaching and learning. Alesinloye (2006) observed that limitation to internet access. This is not untrue about the nation, higher institutions in Nigeria suffer poor or no internet access while majority of the country's secondary schools have no access to internet at all. Lack of skills is also an obvious factor that needs attention in the proper implementation of computer education in the nation.

The high cost of ICT facilities is also responsible for poor administration of ICT in the Nigerian basic schools because many teachers and students cannot afford to buy the various ICT facilities they needed to support teaching and learning in the classroom. Adomi (2006) also identifies cost as one of the factors which influence the provision and use of ICT services, indicating that the cost of computers is too high for many to afford. Brakel and Chiseuga (2003) observe that monthly internet rates are exorbitant and the charges for satellite television are unaffordable for most people in Africa. The high cost of ICT facilities has made it difficult for Nigerian Secondary Schools to acquire and install ICT facilities for the use of teachers and students (Adomi and Kpangan, 2010).

Theoretical Framework

The paper employed systems theory that was propounded by David Eaton (1954) to arouse viewers' knowledge on impact of information communication technology, on the management of Universities in Nigeria. System theory is an entity with a purpose that has interdependent parts. The system is seen as a system which can be, further sub divided into subsystems each having a supra system which constitutes his environment. All the subsystems work toward the maintenance of the life of the social system as a whole, the survival of which depends on its capacity to maintain constancy in its process and relationships with outside the system. The system theory places emphasis on the interdependence and interrelatedness of all the administrative units within an organization. System theory has the ability to maintain itself in equilibrium. Olubadewo (1992) sees system theory as a process from a larger environment variable, such as information communication technology, communication, planning, student welfare services, decision making, University community relationship put back into society to function.

The complex nature of managing schools, especially, university calls for the knowledge of theories which will help build solid management foundation rooted on theoretical facts and empirical procedures. The study need to have in-depth knowledge of management theories for effective management of information and communication for goal attainment.

Application of System theory to the Study

System theory is an important theory used to discuss availability of ICT on communication. This is because system theory is a set of elements functioning as a whole. An example of system theory is management information service. It is a system designed under quantitative management theory to provide information that will be communicated where the information is needed. The information could be informs of oral communication or written communication. The theory when transformed will make communication more effective in an organization (Asibiaka and Oku, 2008). It is impossible to manage human organization without communication. For example, school administration will collapse without communication. Similarly, home will break if there is no communication between couples. ICT has drastically improved method of communication. Many innovations on communication are based on new technologies, computerized information process, system of telecommunication, internet and electronic communication which help one to be reached while he could not reached physically. Every administrator wants to see the success of the whole school under his/her authority as well as provide a nurturing environment for students and staff. The student wants to get through school without feeling unmotivated and bored (Cuban, 1995; Yusuf and Onasanya, 2004).

Methodology

Ex-post-facto research design was adopted. Ex-post-facto or after-the-fact research design was used to find out the factors that are associated or that affect certain occurrences, outcomes, conditions or types of behaviour by analysis of past events or of already existing (Nnadozie & Akuezulo, 1995). The researcher has no control over certain factors or variables as in the case of experimental study. He or she cannot manipulate them because they already exist and cannot be changed or it is unethical to do so. What the researcher does is to search backwards through the data for possible causal factors. According to Kerlinger (1974), ex-post facto research is any research in which it is not possible to manipulate variables, to assign subjects or conditions at random. From this description of ex post facto research, one sees that most of the studies which do not fall into experimental designs and do not involve randomization can be regarded as ex-post facto research.

To generate the relevant data to test and validate our hypotheses, we relied on qualitative method based on logical deduction and analysis of documents. Qualitative method is considered appropriate for this study because the method is well-suited for contextual analysis particularly when the task is to glean, illuminate, interpret and extract valuable information to draw inference from the available evidence so as to reach a conclusion. The reliance on qualitative data generated from secondary sources makes the adoption of this method of data collection imperative.

The mass qualitative data generated in the course of this study was analyzed using qualitative descriptive analysis. This is to enable the researcher ascertain how Information Communication Technology has affected Human Resource Management in the Nigeria University System. This method relied on analyzing an already existing data on the concepts of ICT.

Findings

1. Inadequate ICT infrastructure has affected Human Resource Management in the Nigeria University system.
2. The poor application of ICT has affected Human Resource Management in the Nigeria University system.

Conclusion

Technological innovations engender intensified competition with the attendant rapid changes in many organizations. Many jobs, procedures and organizational structures are not only changing but are becoming obsolete overnight. The emerging trends in organizational management are a paradigm shift towards the adoption and application of information communication technology (ICT). This is in recognition of the fact that information has always played a very important role in human life, but in the mid-20th century, the role of information increased immeasurably as a result of social progress and the vigorous development in science and technology. However, the abilities and capabilities of staffs to contribute significantly to the attainment of organizational goals have been hindered and hampered by some issues which are solvable by adoption and proper application of information and communication technology.

Recommendations

Based on the research findings on the role of information and communication technology (ICT) in human resources management (HRM) in the Public Universities in Nigeria, the following are recommended:

1. That management should employ an enthusiastic approach toward the adoption and proper application of ICT in the University system. This is because management involvement is crucial to ICT success in organization's human resources

management. The support from top management is the precondition for successful ICT in organization's human resources management.

2. That since lack of up-to-date infrastructures, unstable power supply and Lack of financial resources are the major problems of ICT adoption in Human Resource management and therefore should be enhanced. These factors have been identified as factors that have consistently affected adversely, the adoption and proper application of ICT in the University especially in the area of its human resources management.

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